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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,695	05/21/2002	Yukoh Hiei	0760-0350 P	5501

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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WORLEY, CATHY KINGDON

ART UNIT	PAPER NUMBER
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1638

NOTIFICATION DATE	DELIVERY MODE
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01/25/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/089,695	<b>Applicant(s)</b> HIEI ET AL.	
	<b>Examiner</b> Cathy K. Worley	<b>Art Unit</b> 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,12,14,15,17,18,20,21,23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 12, 14, 15, 17, 18, 20, 21, 23, and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. The amendment filed Oct. 24, 2007, has been entered.
2. Claims 2, 8-11, 13, 16, 19, 22, and 25 have been cancelled.
3. Claims 1, 3-7, 12, 14, 15, 17, 18, 20, 21, 23, and 24 are pending and are examined in the present office action.
4. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

#### *Claim Rejections - 35 USC § 102/103*

5. Claims 1, 3-7, 12, 14, 15, 17, 18, 20, 21, 23, and 24 remain rejected under 35 U.S.C. 102(b) as anticipated by, or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hansen (WO 98/54961, published Dec. 10, 1998), for the reasons of record stated in the previous Office Actions mailed on April 25, 2007 and Sept. 21, 2005. The Applicants arguments in the response filed on Oct. 24, 2007, have been fully considered but were not found to be persuasive.

The Applicant argues that because type I callus is hard and dense and the immature embryo is sufficiently large and heavy, it immediately sinks in water, and therefore there is no need to centrifuge the callus (see page 3 and first paragraph on page 4 of the response).

This is not persuasive, however, because the claims are directed to transformation of "plant cells or plant tissue" (see lines 5, 7, and 8 of claim 1). These plant cells or plant tissues are not necessarily type I callus or immature

embryos. Therefore, the fact that type I callus or immature embryos would not normally be centrifuged is not germane to the instant claims. It was well known in the art at the time of filing that in order to change out buffers, solutions, or media; many types of plant cells and plant tissues would be centrifuged to the bottom of a tube such that the buffer, solution, or media could be removed from the top. This was a common practice at the time of filing.

The Applicants submitted a declaration under 37 CFR 1.132, and the Applicants argue that the data shown in the declaration demonstrate superior results (see pages 4-5 of the response).

This is not persuasive, however, because, none of the instant claims are limited in scope to the particular combination of materials and method steps that yielded a superior result. The declaration clearly states that the immature rice embryos were heated at 46°C for 5 minutes, cooled on ice for 5 minutes, and subjected to centrifugation for 10 minutes at 760 xg, 1000 xg, or 2000 xg (see page 2 of the declaration); and the samples that were centrifuged at 1000 xg and 2000 xg had a higher GUS Activity Index which indicated a superior transformation efficiency (see page 4 of the declaration, Table 1). None of the instant claims are limited in scope to immature rice embryos, with a step of heating at 46°C for 5 minutes, cooling on ice for 5 minutes, and subjecting to centrifugation for 10 minutes at 1000 xg or 2000 xg. Therefore, the Applicants showing of a superior result does not apply to the instant claims that continue to recite broad ranges of

temperatures, broad ranges of incubation times, broad ranges of centrifugal force, any type of plant cell or plant tissue, and any genus or species of plant.

The Applicant argues that the allegation of anticipation by Hansen does not disclose all the limitations of the instant claims (see second paragraph on page 6 of the response).

This is not persuasive, however, because a rejection under 35 U.S.C. 102 or 103 does not require the same analysis as a rejection under 35 U.S.C. 102 or a rejection under 35 U.S.C. 103. The rejection is made because the Examiner cannot determine whether the prior art invention possesses characteristics that are not recited in the art. The Examiner does not have sufficient facts to determine whether the claimed method is the same as the prior art method. In addition, the Examiner cannot conclude that the claimed subject matter would have been obvious since it cannot be determined whether the claimed and prior art methods differ. Where the prior art invention seems to be identical, except that the prior art is silent to a limitation being claimed, then the burden shifts to Applicant to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention. See *In re Best* 195 USPQ 430, 433 (CCPA 1977).

Hansen et al teach that "maize tissues are placed in an Eppendorf tube in N6 liquid medium and incubated for 4 min at 45°C in a water bath. The medium is then replaced by an *Agrobacterium* suspension" (see first paragraph on page 19). They are silent with regard to whether or not the maize tissues were centrifuged to

assist in removing the medium before replacing the medium with the *Agrobacterium* suspension. It was well known in the art at the time of filing that in order to change out buffers, solutions, or media; many types of plant cells and plant tissues would be centrifuged to the bottom of a tube such that the buffer, solution, or media could be removed from the top. This was a common practice at the time of filing. Therefore, Hansen et al may have performed a centrifugation step that they neglected to include in their protocol because it was such a common and obvious step to perform (similar to a method step of labeling a tube with a sharpie marker or closing the flip-top cap on the Eppendorf tube); in which case, their protocol would anticipate the method of the instant claims. In the event that they did not perform a centrifugation step, it would have been an obvious variant of the protocol they teach, because it was a common practice that was well known in the art at the time of filing.

Furthermore, Applicant is directed to page 4 of the Office Action mailed on Sept. 21, 2005, where it is stated that the choice of centrifugation speeds would have been the optimization of process parameters. Applicant is also directed to the broad language of claim 1 which recites that the bacteria may be added "after or while" heating and/or centrifuging occurs, and that centrifugation speeds from 1000G to 150,000 G are contemplated.

Given the lack of effect of 760 G on gene expression, the occurrence of increased gene expression at only 1000G or 2000G, and the concomitant deleterious

effects on plant growth at these same speeds (see page 3 of the Hiei declaration of October 24, 2007); it is unlikely that the range of centrifugation speeds recited in claim 1 would provide beneficial effects.

Applicant is directed to *In re Lindner* and *In re Grasselli* cited previously.

6. No claim is allowed.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy K. Worley whose telephone number is

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(571) 272-8784. The examiner has a variable schedule but can normally be reached on M-F 10:00 - 4:00 with variable hours before 10:00 and after 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CKW

DAVID T. FOX  
PRIMARY EXAMINER  
GROUP 180-1638

